

Projections of Hospital-based Healthcare Demand due to COVID-19 in Los Angeles County

February 15, 2021 Update

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Key Findings of the February 15th Update

- This update includes data on hospitalizations through February 12, 2021.
- The underlying statistical prediction model is unchanged from last week.
- Key findings:
 - The number of new patients with COVID-19 requiring hospitalization each day across Los Angeles County has continued to decrease. The illness severity in hospitalized patients remains very high, with high demand for intensive care, mechanical ventilation, and high mortality.
 - Based on the most recent available hospitalization data, information that reflects transmission that occurred in the last half of January, the estimated transmission number ("R") at that time was 0.81 with an uncertainty of 0.76 to 0.85. Our prior estimate for 5 days earlier was virtually identical at 0.82 with an uncertainty of 0.77 to 0.86.

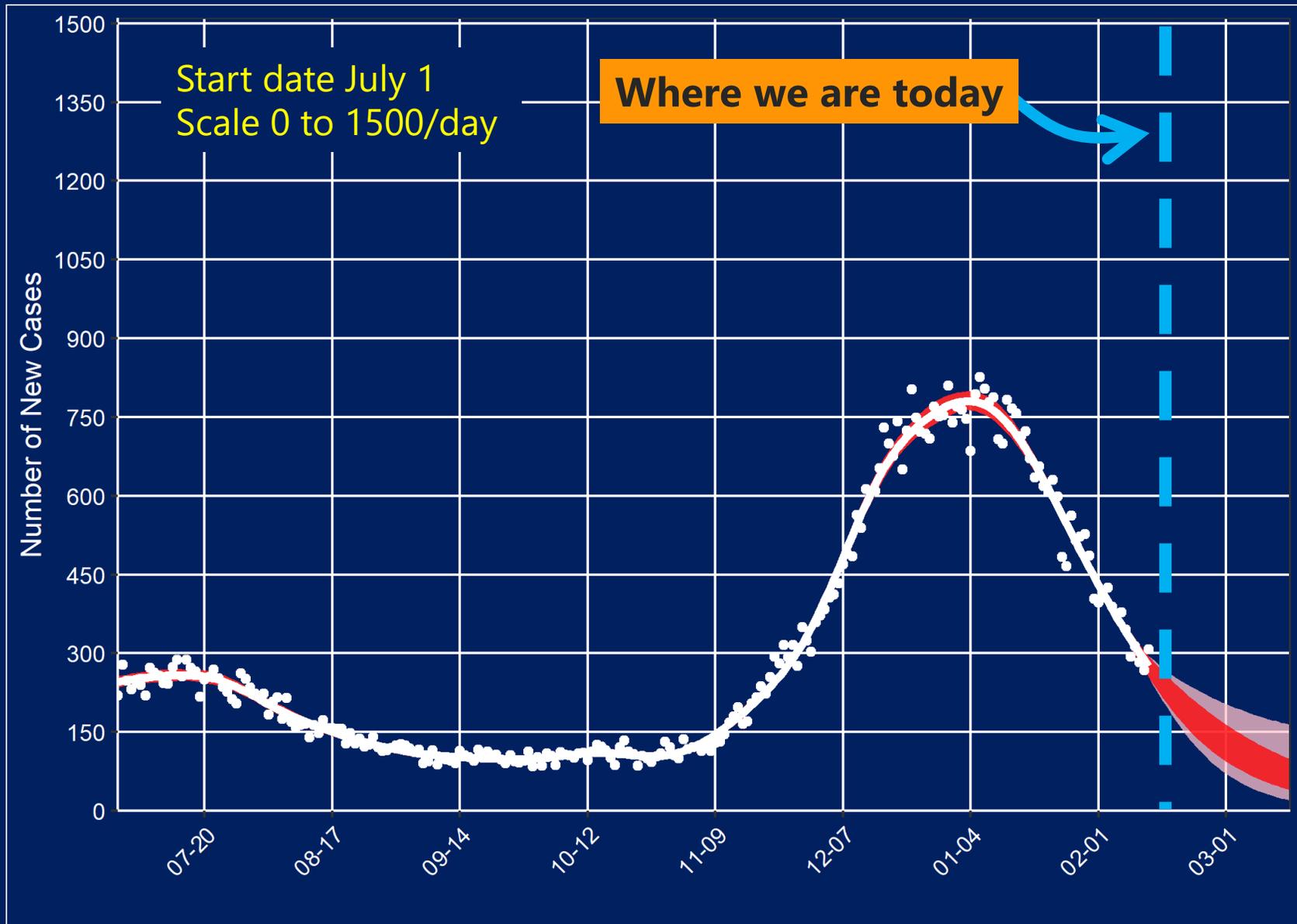
Key Findings of the February 15th Update (Continued)

- Key findings (Continued):
 - Based on the pattern in hospitalizations, we expect a continued high but decreasing demand for hospital-based services including hospital beds and ICU beds over the next 4 weeks. The number of ventilators in Los Angeles County appears adequate over the next 4 weeks.
 - The daily mortality has peaked and, although still high, is falling as well.
 - An increase in behaviors that increase transmission could lead to a new increase in the number of hospitalized patients in about 3 weeks' time.

How Many in Los Angeles are Infectious to Others?

- The DHS team's epidemic model estimates the number of people in Los Angeles County who:
 - Are still **susceptible** to infection if exposed;
 - Have been **exposed** and are incubating, but not infectious;
 - Have COVID-19 and are **infectious** to others, though they may have no symptoms; and
 - Have had COVID-19 and either **recovered** or died, so they are no longer infectious
- The model suggests that about 0.22% (uncertainty of 0.14% to 0.31%) of everyone in Los Angeles County is currently infected and infectious to others.
- This would suggest about 1 in 460 (between 1 in 690 and 1 in 330) Los Angeles County residents are currently infectious to others. One week ago, this estimate was 1 in 360.
- Approximately 1 in 3 persons in Los Angeles County has been infected with COVID-19 since the beginning of the pandemic.

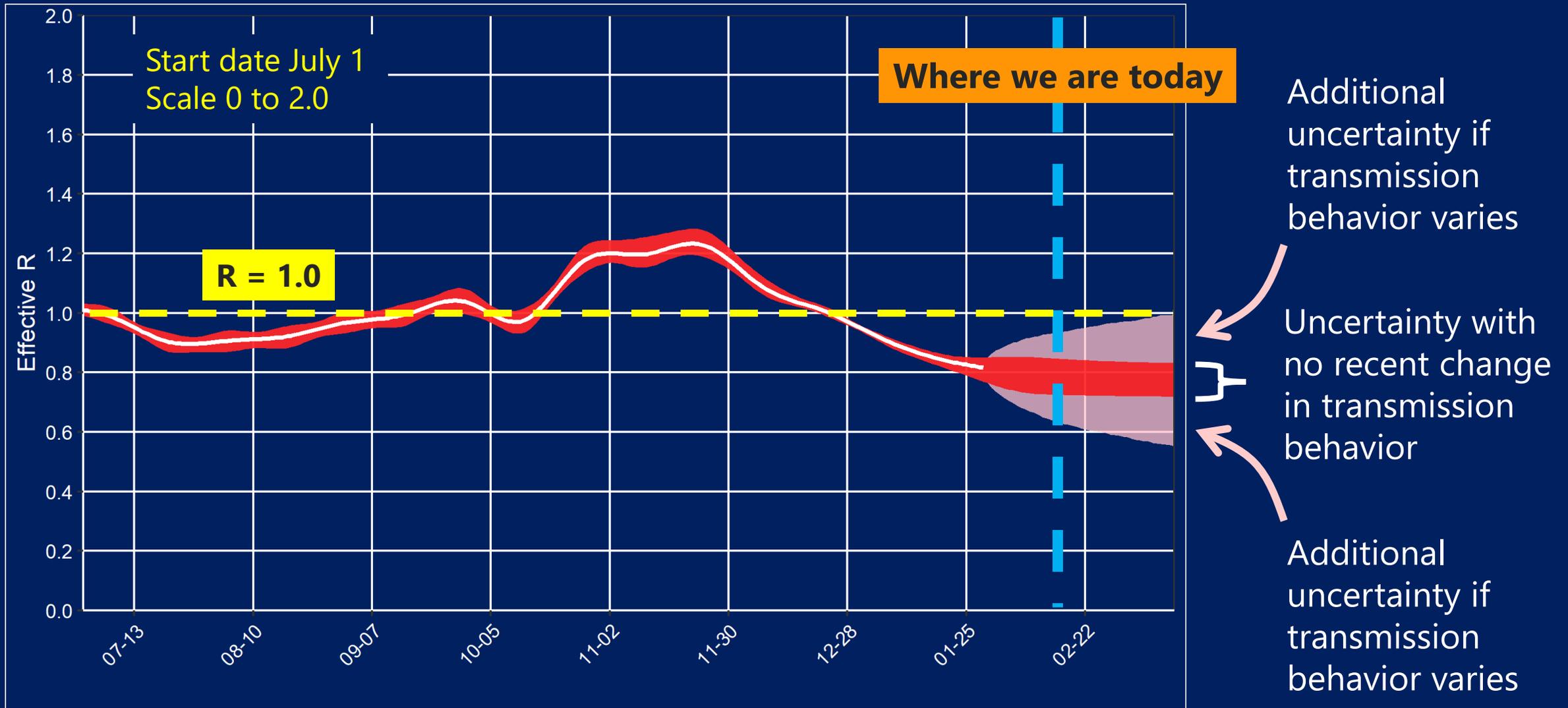
Hospital New Patient Projections



Additional uncertainty if transmission behavior varies

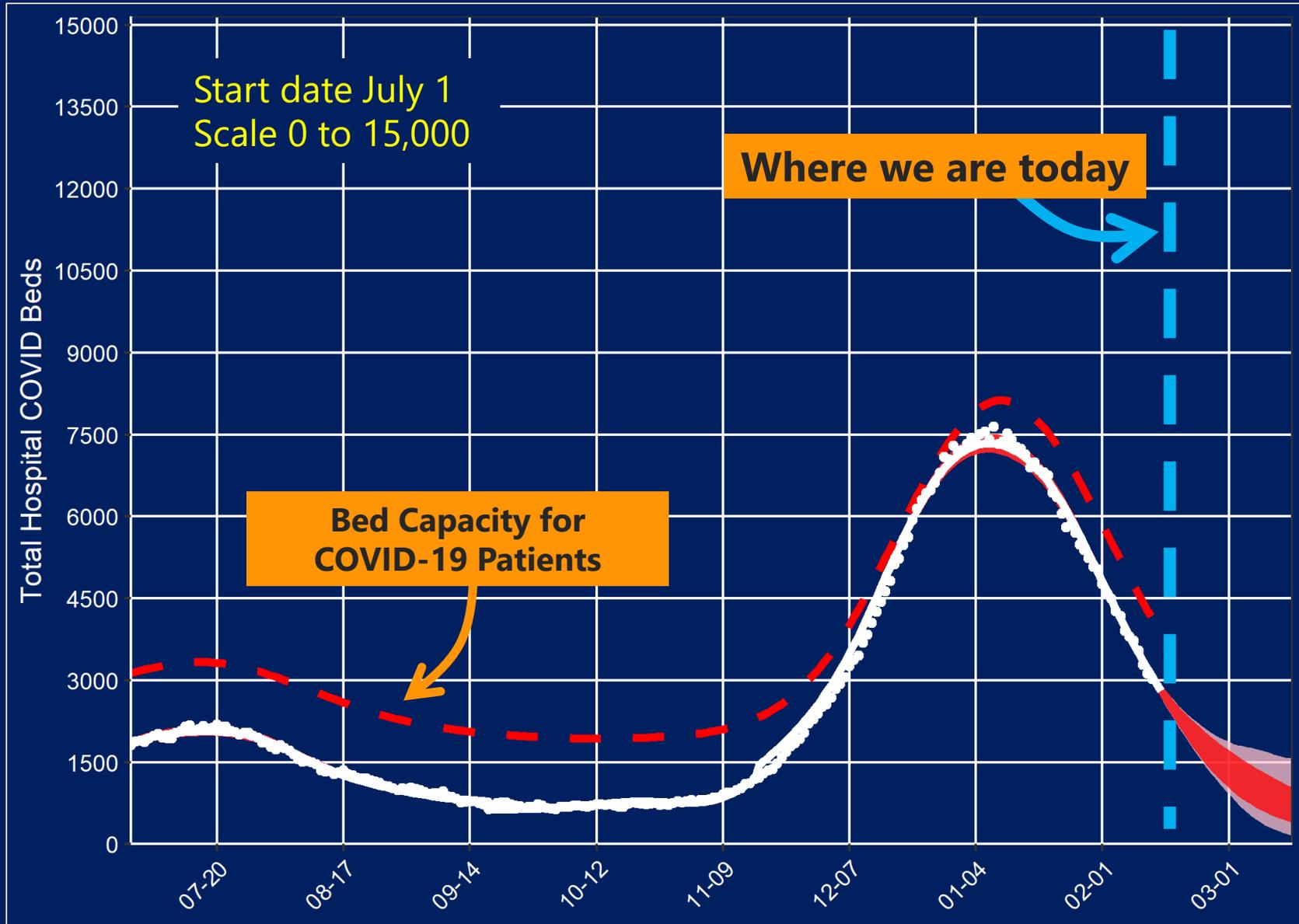
Uncertainty with no recent change in transmission behavior

Effective Transmission Number "R"



Note: We have adjusted the R that we present to account for the fraction of the population that is presumed to be immune to reinfection. At the beginning of the pandemic, this fraction was essentially zero so this would not have made any difference. But as more people have been infected, and are presumed to have immunity, we are presenting an R that includes this factor.

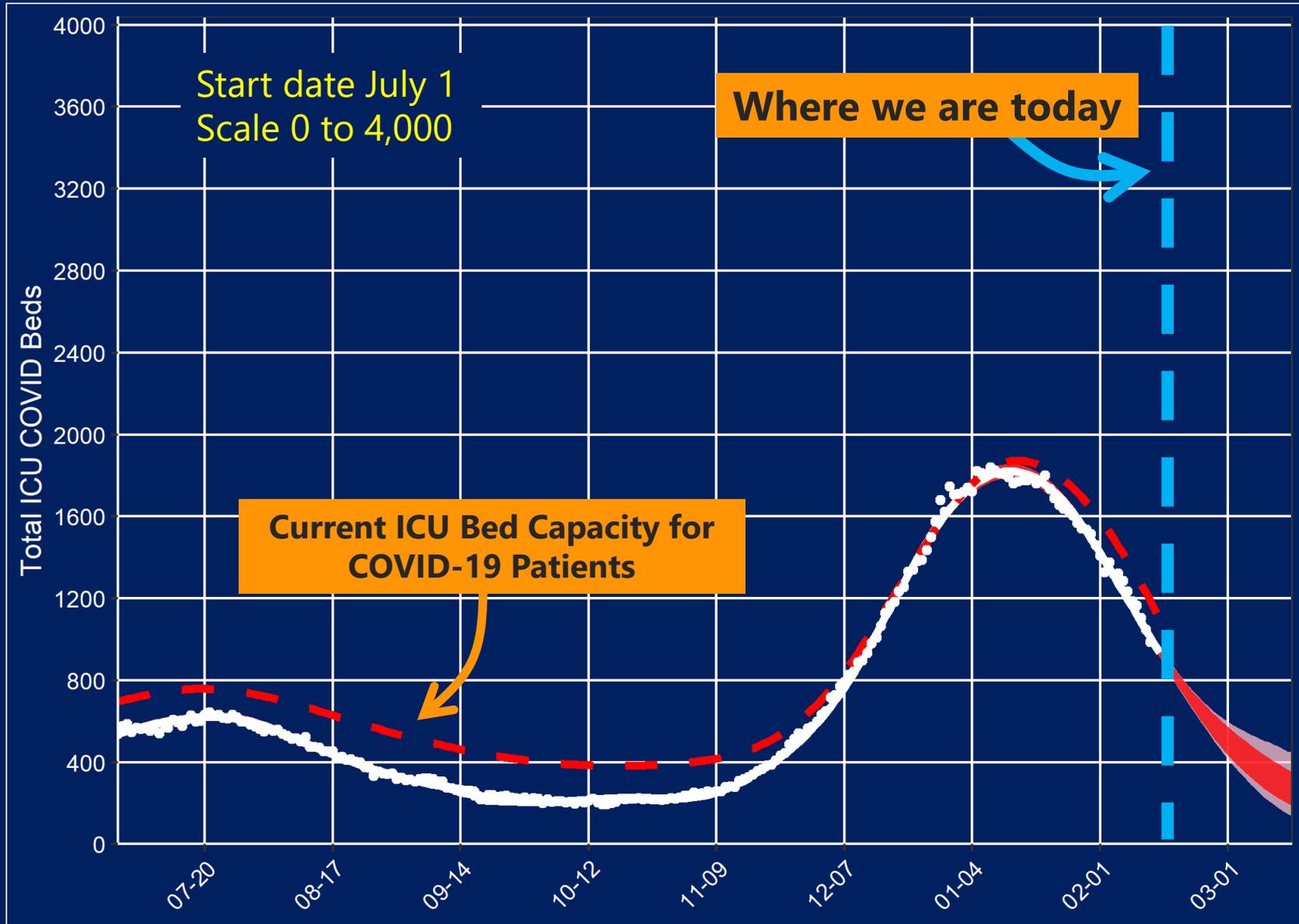
Predictions of Hospital Bed Demand



Additional uncertainty if transmission behavior varies

Uncertainty with no recent change in transmission behavior

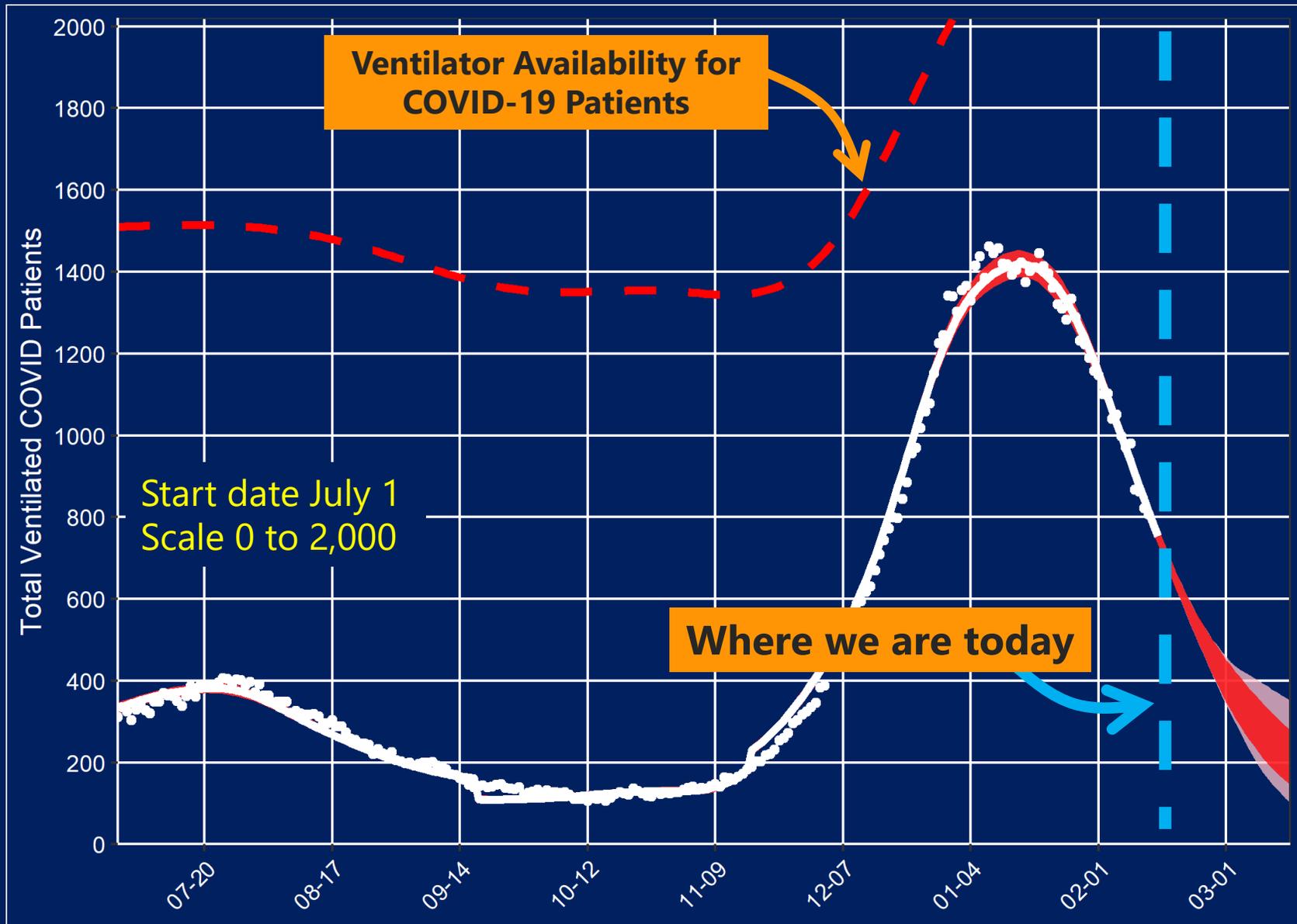
Predictions of ICU Bed Demand



Additional uncertainty if transmission behavior varies

Uncertainty with no recent change in transmission behavior

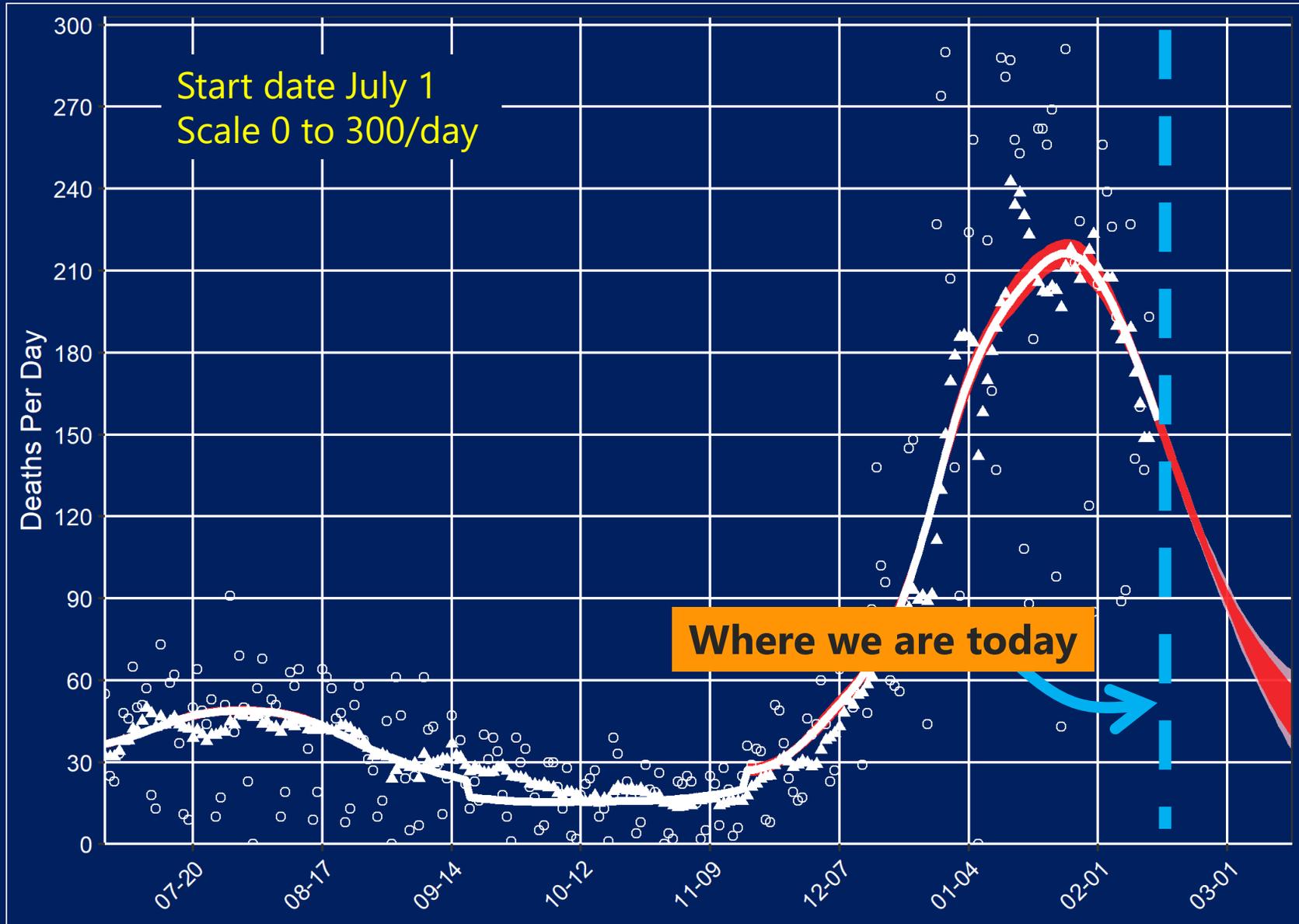
Predictions of Ventilator Demand



Additional uncertainty if transmission behavior varies

Uncertainty with no recent change in transmission behavior

Predictions of Daily Mortality



- Daily reported deaths
- △ 7-day running average

Additional uncertainty if transmission behavior varies

Uncertainty with no recent change in transmission behavior